



NEWS FROM

SCHOONER BAY

INTERVIEW WITH RICARDO JOHNSON

Tell us a little bit about yourself and how you got started as a naturalist and eco-tour guide.

I've been involved in the eco-tourism sector for quite a number of years. I worked in Grand Bahamas, where I sort of got launched, if you will. I was working – and still am – with one of the top eco-tourism companies not just in Grand Bahamas, but I would be so bold to say as in the whole Caribbean. I really got my feet wet working there for quite a few years. But, it was strange how that came about. I was in the dive industry. I was a dive master with UNEXSO (Underwater Explorer



Society) in Grand Bahama. One day at the dive shop, I had a question from a lady about a certain tree, and I had no idea what kind of tree it was. Her response to me was, “and you live here?” Those were the four words that totally changed my life. Here was someone coming to my island expecting me to have this knowledge and I was unable to deliver. I made a vow to myself that I would never let that happen again. That really changed everything for me. I decided to take a year off from diving, and I got involved in

this beautiful sector of eco-tourism during that period. I loved it, I literally fell in love. But, I realized how much





INTERVIEW WITH RICARDO JOHNSON *cont'd*

I did not know about the general landscape and what was going on ecologically. So I've been learning ever since, and moving forward from that day to this. It's a passion and a love for me much more that it is a means to an end.

And a passion that you were eager to share with others?

That's right. A very interesting character, Vidal Sassoon, once said that success unshared is failure. I became an official birding tour guide for the country of the Bahamas, and I've learned a lot along the way, but I always thought that just sitting on all that information would be pointless. I needed to share it, and continue to make people - both Bahamians and visitors - aware of our ecosystem. That's my drive. Many of us have very little information about where we are and what's going on in our ecosystem. I use the phrase "eyes wide shut." We build up our own walls and become so encapsulated within those walls that we fail to notice anything on the outside. I do lectures for the Ministry of Tourism, and one of the things that I do at the beginning of the class is ask, "who saw at least five birds on their way into class today?" I get very little or no response, and the reason is: "eyes wide shut." We're so focused on what we have to do that we miss the obvious. So my whole passion and mission is to bring these things to light and learn how to tap into this valuable natural resource.

Where does Schooner Bay fit in? How did you first get involved?

My involvement in Schooner Bay has been an evolution.

I started off just as a concerned and interested citizen. I live in South Abaco, in Sandy Point just down the road from Schooner Bay, and when I heard about the project I met with some of the key players and began asking questions from an ecological standpoint about the sustainability of the project. Once I really understood the way things were happening at Schooner Bay - their respect for the land and the depth of their commitment to sustainability - I just fell in love with the project. I think the folks at Schooner were very encouraged by my interest in this aspect of the project, and they in turn took an interest in what I was doing. So it was only natural that we would work together to bring to the forefront the true importance of sustainability.



WILD ORCHIDS



And what exactly is your role at Schooner Bay?

Well, I have an office at the entrance to Schooner right next to the offices of the Bahamas National Trust. I operate my eco-tour business from there, offering customized eco-tours, kayak tours and birding excursions throughout the South Abaco region. But I also give tours of Schooner Bay itself. When people come in for property tours I go along and assist as

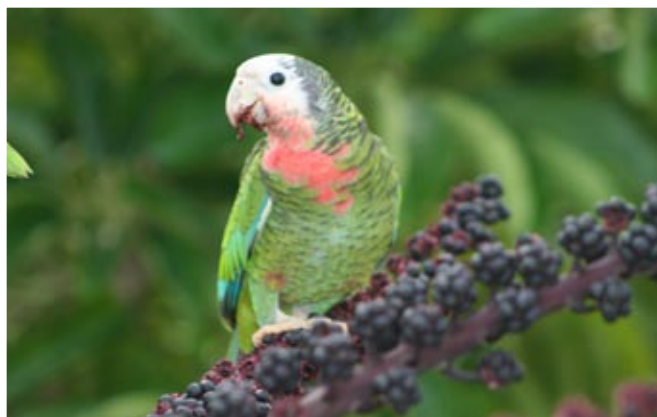


INTERVIEW WITH RICARDO JOHNSON *cont'd*

a naturalist, showing them the community from an ecological standpoint. There's a synergy between the property tours and the nature tours because Schooner Bay's approach to property development is informed by ecological considerations. In other words, the reason that buildings are built a certain way, and at a certain grade, and in one place as opposed to another, all has to do with the ecology of the community, and I can help explain that to people. It helps people see that we're not just talking about sustainability here, but that we're practicing sustainability in every aspect of development. It is important for everyone at Schooner Bay that sustainability isn't just a concept or a marketing device, but a deep and integrated part of everything they are actually doing. Vertical construction at Schooner Bay is only just beginning, but they've already made it a priority to have me on site, to have the National Trust on site. It really shows their commitment to sustainable development, to environmental preservation and education, and also to the development of the eco-tourism sector in The Bahamas.

And how is the development of eco-tourism progressing in The Bahamas?

I'm always careful not to isolate eco-tourism as a specific category. If we look at it from a broader perspective, The Bahamas is an eco-country, and that's the very reason we have such a thriving tourism sector. People come here for the crystal clear waters and the colorful reefs and beautiful beaches and exotic animals and the pleasant climate, and so we need to broaden our discussion of eco-tourism by realizing that the environment of the Bahamas is actually the basis of the entire tourism sector, which is, of course, the most valuable sector in our economy. When people see it this way, they realize that our environment is a valuable asset, and one that needs to be protected. One way to protect it is to showcase it, to teach people about it and to interest them in its beauty. That's where the traditional concept of "eco-tourism" fits in. As I look at the early stages of the industry's development, we still haven't seen the kind of large-scale movement toward eco-tourism that I would like, but I certainly have seen a growing interest over the course of my career. And I really think there's a paradigm shift underway now. I'm getting much more interest from people saying, "I want to come to the Bahamas to see the Abaco Parrot because I know that it's the only place in the world to see this animal," or "I want to come to see the blue holes because I can't see



THE ABACO PARROT



INTERVIEW WITH RICARDO JOHNSON *cont'd*

those anywhere else in the world.” So there is definitely a growing demand and I think we need to be able to supply this experience to visitors. I’d really like to see more Bahamians taking an interest in the industry and getting involved. Sometimes I feel like a lone voice, but I also realize that a passionate minority can become a majority, and so I just try to get the word out as much as I can. Partnering with groups like Schooner Bay and the Bahamas National Trust and Friends of the Environment (local NGO in Abaco) helps get the word out. In fact, I’d like to see Schooner Bay become a place where Bahamians can come learn about the eco-tourism industry. There are 140 acres of pristine, untouched land at Schooner Bay as well as a diverse coastal environment, and so it would be a great place to educate aspiring eco-guides.

Can you talk more about the ecology of Schooner Bay? Why is this an ecologically rich area and what is unique about it from a naturalist’s perspective?

The forest in Schooner Bay is one of the oldest and largest broadleaf forests I’ve seen anywhere in Abaco. The towering trees on the property are absolutely fantastic and unique in a region that is mostly pine forest



THE COPPICE FOREST
AT SCHOONER BAY

elsewhere. As you walk through the forest, you can see the various types of orchids that are growing wild in the area. You have mastic trees in there that are really good-sized, mature trees. You have huge gumbo limbos and poisonwoods. There are several vegetations that I’ve seen only sporadically throughout the rest of Abaco that are all thriving right here on the property. They are in abundance. And because of the direction of the winds and where the energy is coming from, the forest is very healthy. The dunes at Schooner Bay are pretty high, and this allows the energy to cascade up over the tops of the trees and protects the forest. And don’t forget this is a fly belt for the Abaco parrot, so there’s always something going on among the various species of birds that live back there. Then from the coastline, you have a bit of marsh on one side and then the predominant feature is the dunes, and we really see some cool stuff among the dune plants. At Schooner Bay there are all these different ecological zones in a relatively small space, so from an eco-guide’s perspective, I’m able to show people a real diversity of environments in a short space of time. And from a naturalist’s perspective, the whole area is really a thriving ecosystem. It’s just very much alive.



INTERVIEW WITH RICARDO JOHNSON *cont'd*

What are some of the other interesting or exotic flora and fauna you're likely to encounter at Schooner Bay?

Schooner Bay has the mass majority of broadleaf coppice in southeast Abaco, which is very important because it's a foraging area for the Abaco Parrot. They are ground-nesters in the pine barrens, but they forage on hardwood trees. We have a vine that's called "Dotter," which Bahamians know as "Love Vine." It's a major food source for that Abaco Parrot and can be found in abundance in the forest at Schooner Bay. Sapodilla is a native fruit and parrots love them. Having all the fruit-bearing plants in the broadleaf forest is key for the preservation of the Abaco Parrot. There's a tree that I always like to talk about called the Paradise Tree, and they grow only sporadically throughout South Abaco, but within that forest in Schooner Bay, I see them everywhere. And this is a tree that can grow 60-65 ft. tall! So the forest is very unique. I know a guy who travels all over the Bahamas studying the natural environment and he told me that the coppice at Schooner Bay is one of the two most pristine broadleaf forests he has seen anywhere in the Bahamas. The forest is a national treasure, and when I first learned that the land was being developed, I became very concerned about what would happen to this forest. I can't tell you how pleased I am that they've

left this forest untouched. It's immensely important, and I know now that I can come back in ten years or twenty years or fifty years and the forest will still be there. I

will still be able to take people through and see the mastic trees, see the kamalames, see the orchids.



Can you talk a little more generally about Schooner Bay's approach to development? What is unique about it from your perspective as a naturalist?

People can talk sustainability. Schooner Bay shows sustainability. I see all the time people come in and talk about the importance of doing things from an ecological standpoint, and then shortly thereafter it changes. This is very insincere, but it's all too common. I've been reading the new book, *Original Green*, by Steve Mouzon – he's an urban planner who has actually helped out with parts of the design process at Schooner Bay. The book describes what true sustainability really is, and I can't but help to think of Schooner Bay when I read it. In fact, Mouzon has actually said that Schooner Bay is one of the most important projects on the planet right now for sustainable development. I guess I had



believed that before in my own way, but hearing that from a person of authority in his field only solidifies my convictions about what I see happening here every day.



INTERVIEW WITH RICARDO JOHNSON *cont'd*

What are some of the environmental challenges currently facing the Bahamas?

There are many challenges, but if I had to focus in on one major problem right now it would be the clear-cutting of the land by different organizations, whether they are developers or businesses or whoever. There is a wide variety of vegetation in the Bahamas, and much of it is medicinal, and has been used for medicinal purposes through the ages. The destruction of those plants is a great loss to our culture and our well-being. The destruction of coastal areas is another major problem. Dunes are very important. They are natural buffers protecting the coastal areas from the wind and the sea. A lot of people come in and build too close to the dunes, or right on top of the dunes, or they build docks that slash through the dunes. When you destroy the dunes, particularly the pioneer zone, which is really the foundational part of the dune, you jeopardize the stability of the coastline and leave it vulnerable to erosion. From a property-owner's perspective, the dunes are nature's way of protecting your house. It's incomprehensible why people choose to destroy them. It is a very grave concern. I think from a policy standpoint, we as Bahamians need to more closely examine the proposals of some of these developments. We need to be able to say, "we appreciate your offer and your interest in The Bahamas, but we don't think your model is the type of model that helps encourage sustainability in the country." Then we could work with them to develop a better model, but it's something that we as Bahamians need to focus on more and show more leadership on.

You touched a little bit earlier on some of your goals as a naturalist and environmental educator. What do you want your ultimate legacy to be in that regard?

I'll tell you a good story. I used to do lectures for

Bahama House, and one of the young ladies that was in my class was very skeptical. She didn't believe that learning about birds and plants and ecology was important in her life and she was constantly asking, "why do we need to know this?" I realized that she wasn't going to find the answer to that question in her textbook, and so I changed the curriculum. Instead of reading a book about trees or about flowers, I brought those trees and flowers into the class setting, and all the students gathered around and we discussed the different types of vegetations. You see, nature isn't a concept that needs to be mastered or a theory that needs to be understood like so much else that we learn about in a classroom. Nature is a reality that needs to be experienced, and once I let my students experience that reality it changed everything. And that same girl who was so skeptical, I just talked to her recently, and she told me she still remembered everything she learned in my class. Now she can walk through the world and see things differently, see plants and animals and ecosystems and understand them and how they are inter-connected and how she too is connected to them. I think I would consider myself successful if I can help people better understand the world around them, if I can change how they see the natural world and how they interact with it.

One thing I would really like to see is in the south of Abaco, in my community, more people learning about the natural resources around them. People already have a deep connection with the environment in my village, Sandy Point, because it's a fishing village, but I want them to realize the diversity of the environment and how the different environments come together to create this beautiful place where we live. It's important we don't take these things for granted. I want children to grow up in this community and realize that it is unique, that they have things going for them. For example, the Abaco Parrot is the only ground-nesting parrot in the world



INTERVIEW WITH RICARDO JOHNSON *cont'd*

and I want people to realize how unique and special it is that this animal lives here. If they take an interest in these things, they will take even greater pride in their community, and they can then invite visitors in and show them these natural wonders. Because there are people out there who want to see these things, and if we as Bahamians know how to show them off, it allows these visitors to experience the people of the Bahamas and the ecology of the Bahamas in a truly authentic way. I think certain people want to get away from the everyday, average hotel experience. Not that there's anything wrong with that experience, but it shouldn't be the only experience available for people visiting the Bahamas.

Let me tell you one last story. I did a birding trip for a young lady. It was her birthday and her husband told her that, as her birthday gift, he was going to take her on a trip anywhere she wanted to go in the world. And she said she wanted to go to Abaco to see the parrots. One of the things she said to me after she saw the Abaco Parrots, was, "Ricky, I can die happy now." That was how she felt after seeing that bird, and I felt proud because I was able to give her that experience. So there is interest out there, and it's a great opportunity for Bahamians and visitors alike. I hope that my legacy one day will be that I did all I could to help develop this opportunity for my community and for my country.



BUSINESS DEVELOPMENT UPDATE

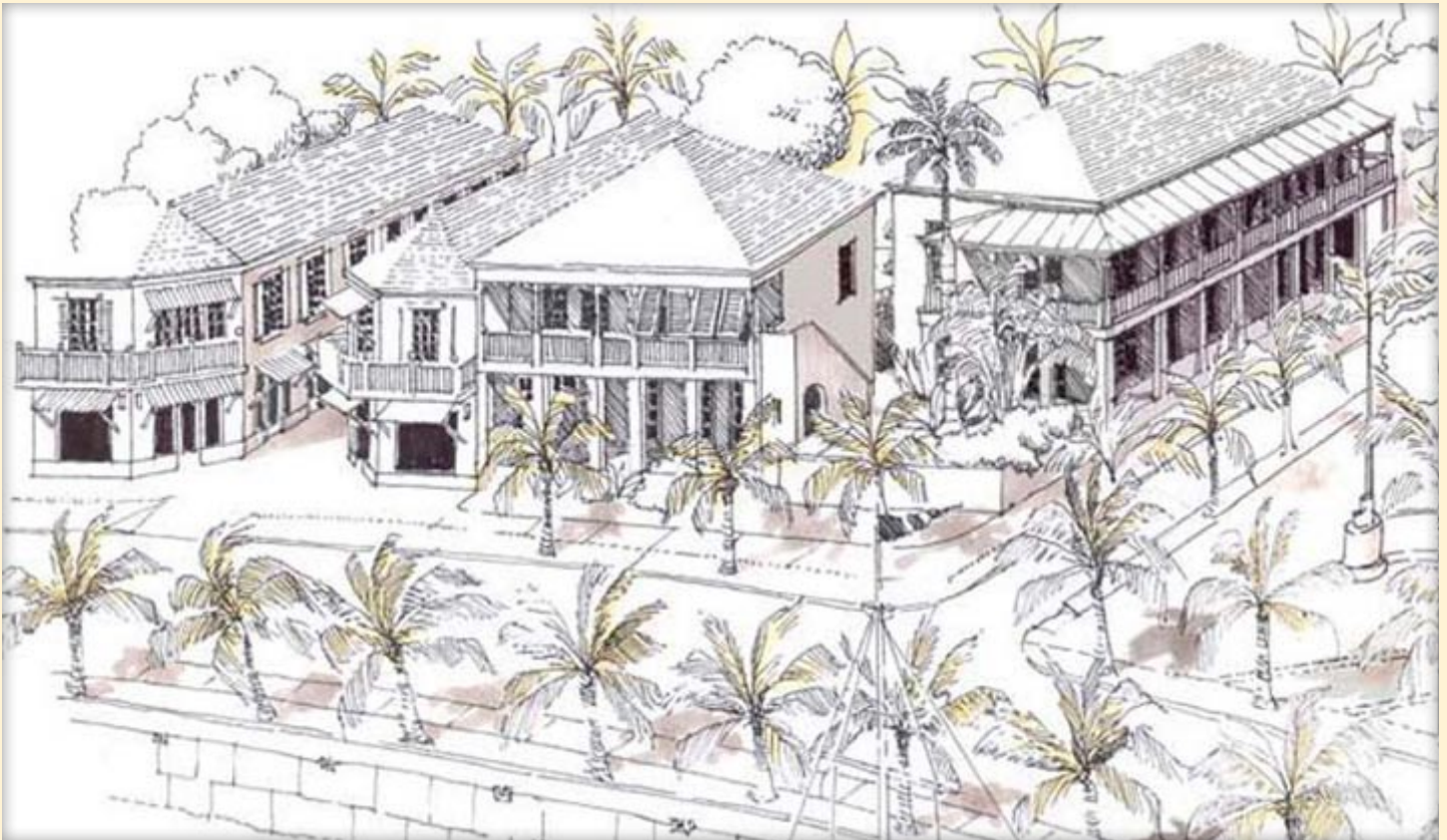
We have made business development in South Abaco a top priority, and our initiatives are continuing to attract local businesses to Schooner Bay. In addition to **Ricky Johnson's eco-tourism business**, the entrance to Schooner Bay is also home to the offices of the **Bahamas National Trust** and will be home to **Black Fly fly-shop** while the bonefish lodge undergoes construction in the village. Also opening soon at the entrance to Schooner Bay is **Joe's Ribs**, an authentic barbecue outpost owned and operated by a resident of Crossing Rocks, a fishing village just south of Schooner Bay. Discussions are ongoing with other Bahamian businesses across a range of sectors about further business development in the community. Notably, talks continue with leading Bahamian health care professionals about the development and management of the **Schooner Bay Clinic**, a medical facility that will be located in Schooner Square, the plaza on the ridge overlooking the harbour village.



SCHOONER BAY CLINIC



CONSTRUCTION OF SCHOONER PASSAGE CONFIRMED



In another boon for business development at Schooner Bay, we can now confirm that we have the necessary commitments to begin phased construction of Schooner Passage, a retail and condominium complex along the harbour-front on Bay Street. The four-building complex will be located in the centre of town, adjacent to Angler's Village and the Black Fly Bonefish Lodge, and will feature live-work units with harbour-view retail space on the ground floor and ocean-view living space on the upper floors. We are confident that Schooner Passage, with its central location and its diverse mix of purposes, will become a bustling hub of civic activity within the village.



FARM UPDATE



Schooner Bay farmers are busy conditioning the soil for a new crop of fruit and vegetables, much of which will go to the kitchen of the Black Fly Bonefish Lodge for fishing guests. Garden plots are available for cultivation to residents and businesses in the community, and Black Fly Bonefish Lodge is now officially the first business at Schooner Bay to have its own kitchen garden! The availability of locally-grown produce in Schooner Bay is a key component of our plan towards sustainable development, and all restaurants, households and markets in the village will have access to fresh, organic fruits and vegetables grown on site. In later phases, a Farmer's Market will be built in the Commons area of Schooner Bay, making fresh, local produce available to residents of Schooner Bay and South Abaco.





SITE WORK UPDATE



The final phase of the two-year fill program in the Harbour Village is nearly complete, with only the grading of the South Village and some final ledge work remaining. This stage of site work should be finished by October, after which work will begin on roads, utility trenches, landscaping and residential and commercial construction.



HARBOUR UPDATE

Unseasonably high tides and large surf from passing tropical disturbances created some interesting challenges for Schooner Bay's engineers in recent weeks as they progressed with harbour excavation and bulk-heading. Though construction was temporarily slowed while the weather moved through the region, work now continues apace, with the bulk-heading of the harbour island two-thirds finished and on track for completion in the third quarter. Once complete, vertical construction will commence on the island houses, with 10-12 residences expected to be in various stages of construction by the end of this year. Bulk-heading of the entire harbour wall is expected to progress at a quicker pace, with completion slated for sometime in the first quarter of 2010, after which the harbour will be opened to sea.





SCHOONER BAY SPRING FESTIVAL SCHEDULED FOR APRIL 16TH, 2011

Please make note that the scheduled date for Schooner Bay's "A Day Out for Autism" has been changed from October 23rd to April 16th 2011. The event has been renamed Schooner Bay Spring Festival and has expanded to include the Abaco Arts Expo and South Abaco Community Open House in addition to the Bike-Run-Walk fundraiser event for Autism Awareness. Participants in the fundraiser can run, bike or walk along the Ernest Dean Highway, which runs through a protected forest of Abaco pine and connects the fishing village of Sandy Point to Schooner Bay. For those in Nassau, the Seawind Ferry will leave Potter's Cay at 7am and return at 8pm the same day. Complimentary ground transportation in Abaco will be provided. The event finishes in Schooner Bay, where we will host a beach barbecue for all participants. Come spend the day at Schooner Bay and help support a great cause! For more details, please contact James Malcolm at 242-362-4422 or write james@lindroth.cc

SCHOONER BAY *Spring Festival* APRIL 16TH, 2011



Bike-Run-Walk
for Autism Awareness



SPECIAL FEATURE

Breakthroughs in Sustainable Development at Schooner Bay

In the following excerpts, some of Schooner Bay's leading design and engineering contractors explain how they are weaving their ideas, inventions and expertise in the field of sustainable development into the fabric of the Schooner Bay community. The systems they describe all represent elegant solutions to fundamental challenges facing the future of development.



SPECIAL FEATURE : *Breakthroughs in Sustainable Development at Schooner Bay*

JONATHAN TODD EXPLAINS SCHOONER BAY'S ECO-MACHINE™



Jonathan Todd co-founded the Cape Cod-based New Alchemy Institute and is a pioneer in biologically-driven utility systems. His Eco-Machine™ represents the cutting edge of modern clean energy solutions and is an iconic system in the field of sustainable development.

John Todd Ecological Design is proud to participate in the Schooner Bay project. Many developers are seeing the financial benefit of “GREEN” design but few take the concept of sustainability into the heart of their project. At Schooner Bay, we found a group that is far ahead of the curve in many facets. Few, if any resort development projects have hit so many of the benchmarks of true sustainability. Schooner Bay ignored the myopic industry

standard of collecting LEED points and capitalizing on green washing for the purpose of marketing, and the team at Schooner Bay has demonstrated a profound understanding and respect for the environment and culture of its unique location. JTED hopes to partner with Schooner Bay and the Bahamian government to help preserve the beautiful ecology of The Bahamas and create a model for sustainability in the developing world.

At John Todd Ecological Design, our objective is to integrate the by-products of the waste treatment process to seamlessly benefit the ecology of a site. Natural treatment systems are proven more effective than their conventional counterparts at the removal



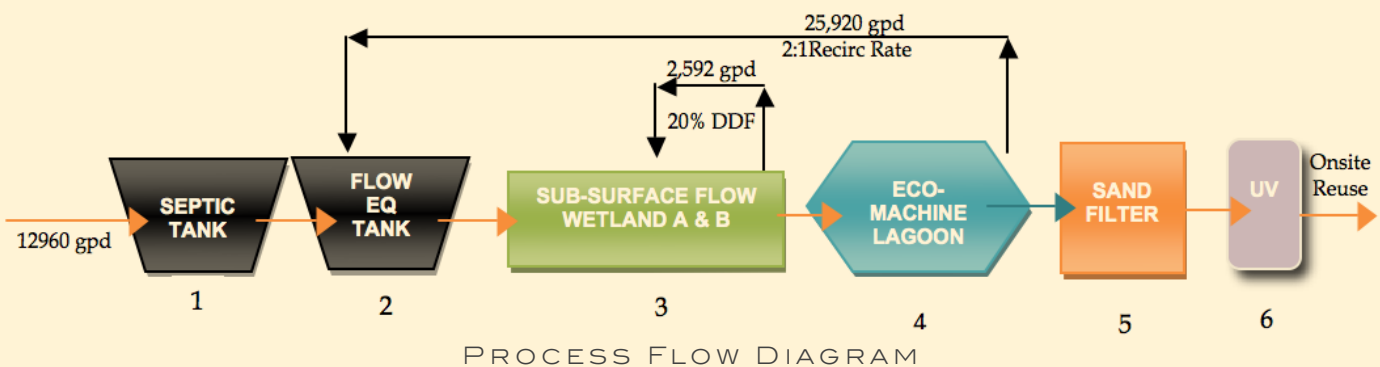
SPECIAL FEATURE : *Breakthroughs in Sustainable Development at Schooner Bay*

Jonathan Todd Explains Schooner Bay's Eco-Machine™ – cont'd

of pharmaceuticals, personal care products and other potentially dangerous endocrine disruptors. The Eco-Machines™ we build (one of which is currently being designed for Schooner Bay) are affordable, duplicable, and symbiotic natural waste treatment processes that resemble lush lagoon ecosystems. Here's how they work: wastewater from individual residences is conveyed to the Eco-Machine™ head-works by a low-pressure sewer system via grinder pump stations, allowing solids management to be handled at a single point (the Eco-Machine™ septic tank) rather than multiple septic storage tanks located close to dwelling units. Within this 10,000-gallon tank anaerobic bacteria will begin to degrade the settled solids and break down organic matter. A 10,000-gallon capacity flow equalization (flow EQ) tank follows the septic tank, and provides attenuation of daily and weekly peak flows, enabling the septic tank effluent to be fed to the Eco-Machine™ on a continuous basis by the pumps in the equalization tank. The wastewater is then pumped into constructed wetland treatment cells, the first phase of the ecological treatment processes of the Eco-Machine™. The treatment process occurring in wetlands is primarily the metabolic digestion of nutrients in the wastewater by biological communities that thrive in and around the root systems of plants. These constructed wetlands

will be subsurface flow (SSF) wetlands with horizontal flow through a shallow bed of limestone. The limestone, available in abundance on site, is an excellent medium for absorption of phosphorous, but the soft nature of the stone often leads to bio-fouling, so we are developing mesh shells that will contain the limestones, making for easy removal upon bio-fouling, at which point they can be crushed and used as a soil treatment high in minerals, nutrients and organic matter.

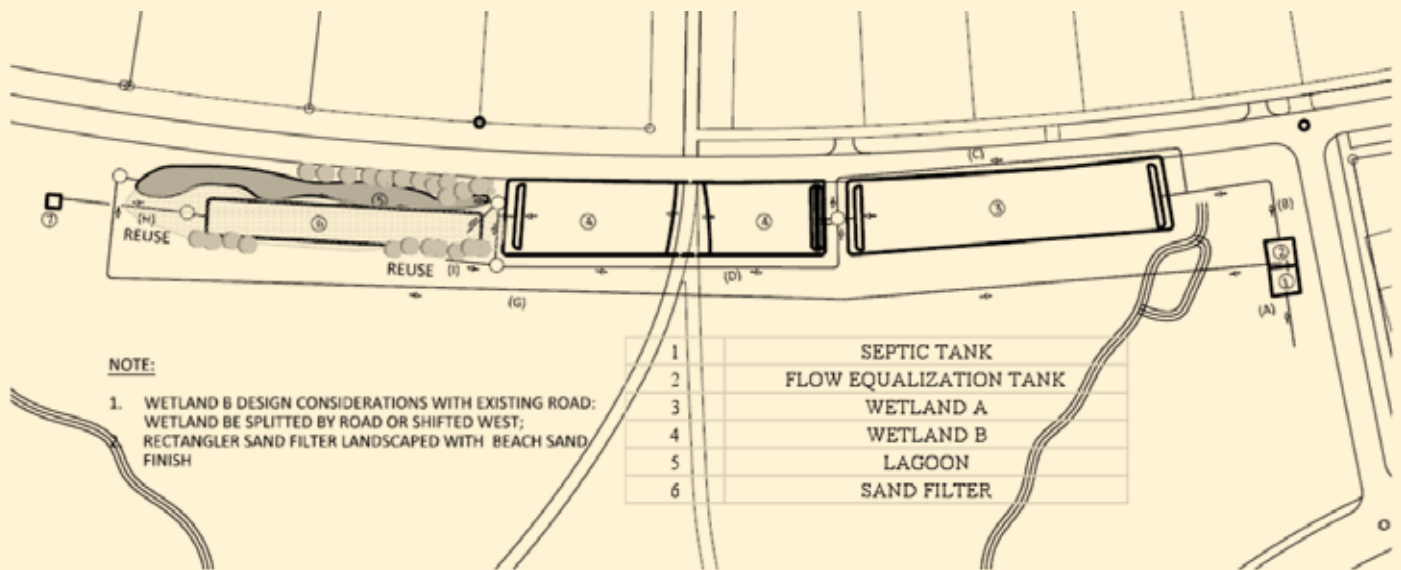
After passing through the wetland cells, the treated wastewater then flows into a lagoon. The lagoon systems of the Eco-Machine™ will be in the form of a beautiful water garden that has been designed to provide advanced treatment. The lagoon system at Schooner Bay will appear and function as an active fen, or spring-fed pond, through the creation of eddies, countercurrents and contact zones optimizing bio-diversity. A robust ecosystem is created in the Eco-Machine™ between the plants, microbial species and distinct treatment zones. Within the lagoon all the major groups of life are represented, including microscopic algae, fungi, bacteria, zooplankton and protozoa, and higher animals such as snails, clams, shrimp and fish. Higher plants, including shrubs and trees, are grown on adjustable industrial strength fiberglass racks that are suspended





SPECIAL FEATURE : *Breakthroughs in Sustainable Development at Schooner Bay*

Jonathan Todd Explains Schooner Bay's Eco-Machine™ - cont'd



CONCEPTUAL LAYOUT OF ECO-MACHINE

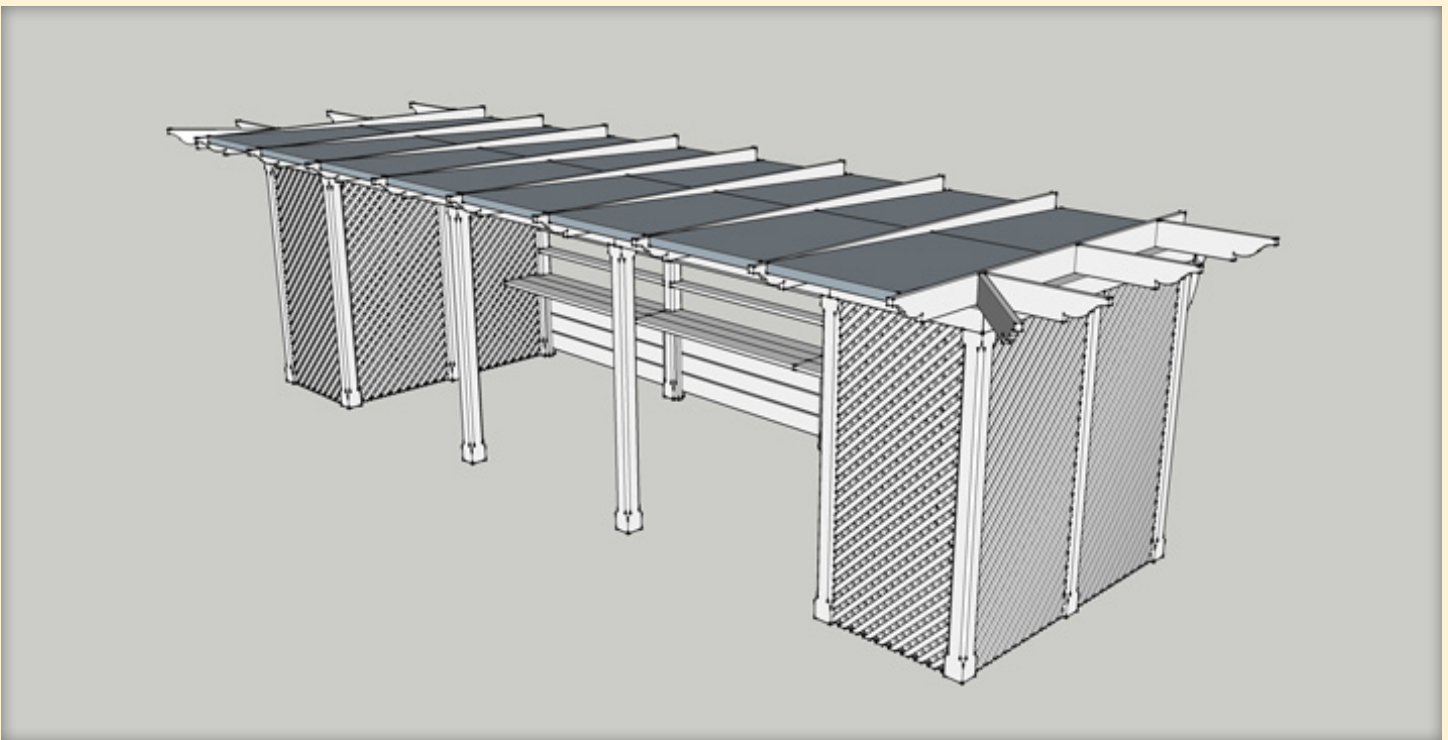
within the system. Plants propagated in the wetland and lagoon can also be sold to homeowners and landscaping companies or taken to market through the Schooner Bay Farmer's Market. From the lagoon, the clean disinfected treated effluent from the Eco-Machine™ will flow into a water storage tank. The purified water will then be used to irrigate landscape and non-food plants and trees at Schooner Bay. The final result is an efficient and refined wastewater treatment system that is capable of achieving high quality water within an aesthetic amenity. Instead of the liability and loss of usable land imposed by conventional systems, the ecological system will enhance the area it occupies.





SPECIAL FEATURE : *Breakthroughs in Sustainable Development at Schooner Bay*

**STEVE MOUZON INTRODUCES
SCHOONER BAY'S "SOLAR PORCH"**



Steve Mouzon is a noted urban designer and author with a long working relationship with the Schooner Bay team. He is a leading voice in the New Urbanist movement and his new book, "Original Green," is an important manifesto for good sustainable development.

The team at Schooner Bay recently challenged me to evolve and adapt a simple "green" potting shed into a new type of architectural element that addresses a number of sustainability concerns and opportunities in the Bahamas. This element aspires to an iconic identity derived from the combination of needs that it serves. The issues addressed were significant enough that we gave the element a name: the Solar Porch. Here are some of the things it does:

- Photovoltaic panels are located on a flat roof, with scrolled rafters to baffle the view to the panels.
- The south wall of the Solar Porch is a wall of shelves for potted herbs, creating an edible green wall.
- The pavilions on either end can house a number of functions, including garden tool storage, solar equipment, laundry drying racks, and possibly even a stacked washer and dryer.
- The shaded space between the pavilions also houses a number of uses, including the original potting shed and recycling bins, plus compost bins, a desalination unit, and an outdoor shower.

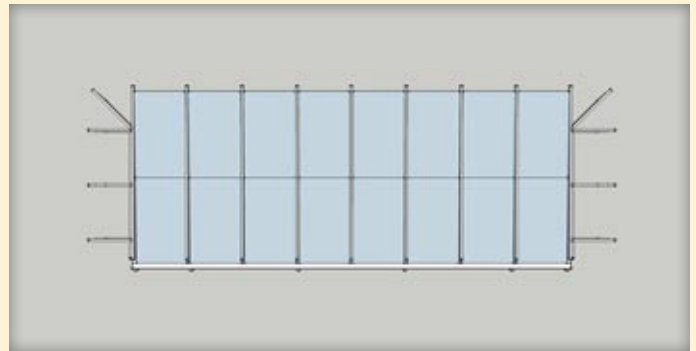


SPECIAL FEATURE : *Breakthroughs in Sustainable Development at Schooner Bay*

Steve Mouzon Introduces Schooner Bay's "Solar Porch"- cont'd

The Solar Porch, as evident in its name, is now no longer just a utility shed. One of the biggest sustainability moves a building can make is to build a series of garden rooms around it to entice people outdoors so that they become acclimated to the local environment, so they need less air conditioning once they return indoors. Outdoor

rooms need walls of some sort, which may be hedges, fences, porches, or building walls. The Solar Porch will serve very well as the edge of adjacent garden rooms, not only dividing those garden rooms, but also providing shaded places to sit adjacent to those outdoor rooms.





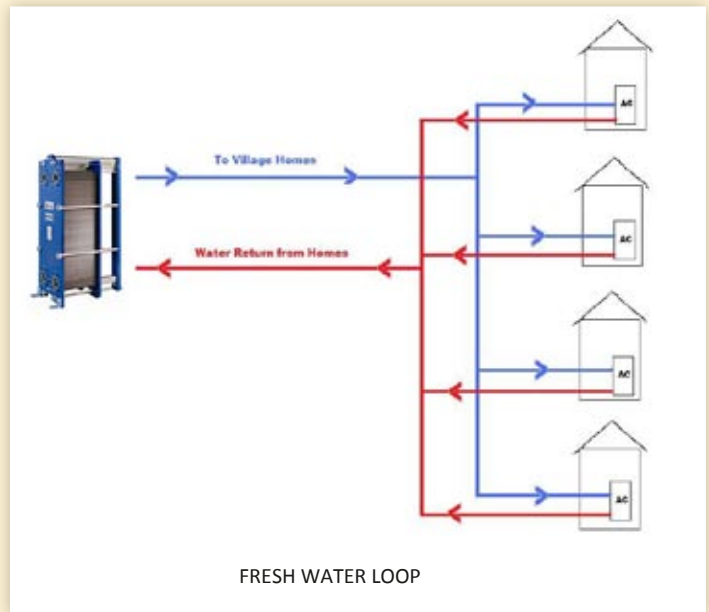
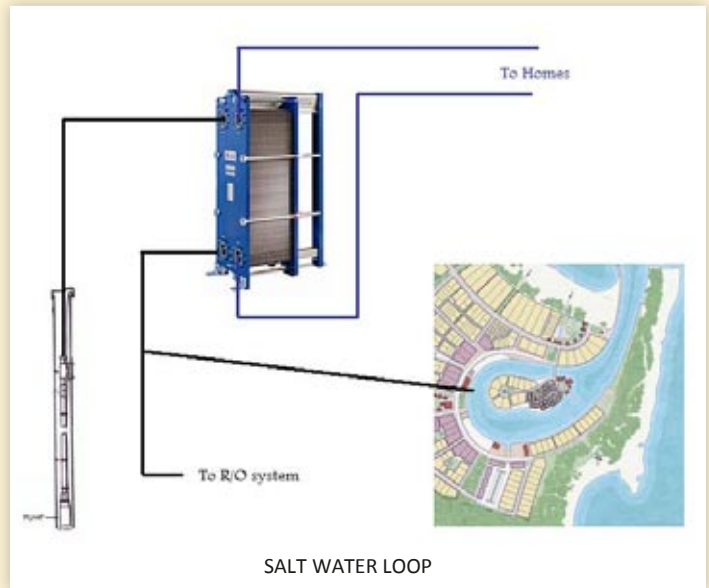
SPECIAL FEATURE : Breakthroughs in Sustainable Development at Schooner Bay

**TREY AUSTIN DISCUSSES
SCHOONER BAY'S GEOEXCHANGE**

Trey Austin is Vice President of Geo-Energy Services, a top global provider of geothermal energy solutions. Colorado-based GES is an industry thought-leader and developer of scalable clean energy systems.

Schooner Bay is currently in the early stages of design for a sustainable, clean-energy way to air condition the buildings in the community. This system, called GeoExchange, will utilize a brackish or brine well-water source as the primary means to reject the heat energy to satisfy the air conditioning requirements of all the buildings. A distribution piping network from the well to each building, much like a domestic water piping network, will connect to a geothermal heat pump unit located inside each housing or retail building that will provide air conditioning. This approach to air conditioning results in a 35% cost savings on electricity. In addition, the geothermal heat pump unit does not require any outdoor equipment, thus doing away with the corresponding noise and aesthetical detriment typically associated with traditional outdoor air conditioning units. This noise elimination and absence of large outdoor machinery will enhance the serenity of the natural environment.

A special secondary option included on our geothermal heat pumps is specifically designed to dehumidify or remove the moisture out of the air. The traditional method to dehumidify the air is to operate the air conditioner and over-cool the space, thereby, causing the occupants to be cold and uncomfortable with 65°F to 70°F room temperatures. The dehumidification option on the geothermal heat pump, called ClimaDry®, will adequately dehumidify the space while maintaining a comfortable





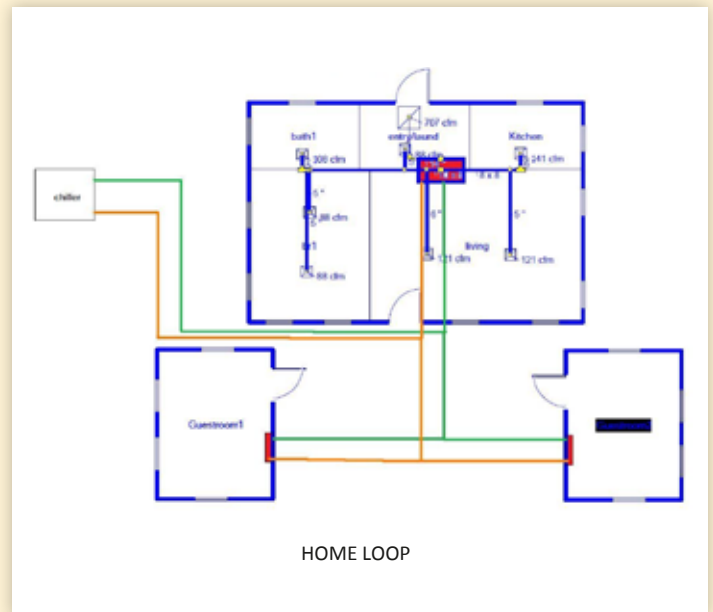
SPECIAL FEATURE : *Breakthroughs in Sustainable Development at Schooner Bay*

Trey Austin Discusses Schooner Bay's GeoExchange- cont'd

72°F to 77°F, thus preserving the integrity of interior finishes, home furnishings, or artwork. The ClimaDry® system also results in significant energy savings, as it can still effectively dehumidify interior spaces while the owner is away and air conditioning is turned off.

Another significant benefit to the geothermal heat pump unit is the ability to provide heating on the rare occasions when you may want a slight increase in room temperature. No special equipment is necessary to enable this feature; the thermostat is simply changed from cooling mode to heating mode on the wall. No other traditional air conditioning system can offer such a feature. We are investigating the idea of providing domestic hot water heating using water-to-water geothermal heat pump units. This may assist in further energy cost savings by heating domestic hot water while increasing the overall efficiency of the air conditioning portion of the system. A conclusion on this feasibility of integrating domestic hot water should be reached in the near term.

Along with our teaming partner, Geo-Energy Services, we are very excited to be utilizing a new technology in the Bahamas that will slash expensive electricity costs, reduce carbon-based energy consumption, eliminate outdoor noise, preserve residential aesthetics and ecological purity and help further the overall vision for sustainable development at Schooner Bay.





SPECIAL FEATURE : *Breakthroughs in Sustainable Development at Schooner Bay*

KEITH BISHOP DESCRIBES SCHOONER BAY'S WATER CATCHMENT



Keith Bishop is Schooner Bay's Coastal and Environmental Director

The Schooner Bay team first encountered large-scale, subterranean rain-water collection cisterns in the desert of Saudi Arabia, where the scarcity of fresh water resources makes the efficient collection of rain-water a survival imperative. After studying these ingenious systems, we decided to build one of our own, and have been proceeding with the excavation of an

approximately two million gallon cistern that will serve as an important supplement to Schooner Bay's water supply. The excavation in the limestone atop the ridge at Schooner Bay is 200 feet wide by 265 feet long and an average depth of 12 feet with a volume of 636,000 cubic feet. Surface water run-off from the surrounding area will be diverted and gravity-fed into the cistern. To use the collected water an array of perforated pipes will be built in the lower levels and wrapped with a geo-textile to prevent the sand from entering the pipe.



SPECIAL FEATURE : *Breakthroughs in Sustainable Development at Schooner Bay*

Keith Bishop Describes Schooner Bay's Water Catchment- cont'd

These pipes will then be connected to a lateral pipe that will allow flow through the side wall to be used in water supply and irrigation. The excavated cistern is lined with a high density polyethylene liner and then filled with sand sourced from the harbour excavation. Water will be retained in the voids that exist between the sand particles. The voids ratio for our sands varies between 40% and 45%, which yields a potential storage of approximately two million gallons. Keeping with Schooner Bay's commitment to resourcefulness and waste reduction, the limestone excavated from the cistern has been put to productive use as fill material in building pads. And in keeping with its commitment to preserve the natural beauty of the landscape, the water cistern will be planted over with grass and indigenous trees, appearing to the idle passerby as a dramatic row of tropical palms lining the ridge above the Atlantic Ocean.





A MESSAGE FROM SCHOONER BAY ARTIST-IN-RESIDENCE, ANTONIUS ROBERTS

The foundation of new towns has spawned a new type of civic institution, “The Development Corporation,” which is concerned with the creation of urban centers. An important part of this institution’s responsibility to the communities it creates is the establishment of a cultural environment to enhance the quality of civic life and promote ongoing education and artistic expression. Schooner Bay, arguably the first new town developed in The Bahamas in over one hundred years, is an exemplar of this essential commitment to artistic cultivation. For me, it is an honor to be appointed Schooner Bay’s “Town Artist”. In this capacity I will act as a consultant on design matters and establish a presence for art in the community, engaging as many artists as possible in the production of murals, sculptures, signage, public art



pieces and art symposiums. I will also continue my own artistic pursuits, both in my recently completed studio in the village and elsewhere throughout the community by creating sacred spaces with natural materials. My studio will embody the philosophy of Schooner Bay, while focusing on ways to sustain the production of art and artifacts created out of reclaimed materials. A strong art educational component will be developed to provide opportunities for young people in and around the Abacos to fully explore and develop their artistic skills, while being exposed to an extensive community of practicing artists. The National Art Gallery of The Bahamas, POPOPSTUDIOS in Nassau, and art majors from The Collage of The Bahamas will be connected to and engaged in all art programs initiated through the studio.



**ARTIST-IN-RESIDENCE ANTONIUS ROBERTS
ANNOUNCES COMPLETION OF POST HOUSE
& WELCOMES VISITORS**



post

*The starting point, the finishing point. To announce or publicize thus.
An assigned or appointed position. To inform.*

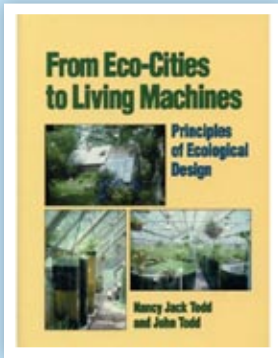
house

*A building for human beings to live in. Providing shelter.
Building where legislative assembly meets*

My cottage has become the “Post House” at Schooner Bay! It certainly embodies Schooner’s philosophy and has set a new benchmark for construction in The Bahamas. I believe it is an excellent example of the cultural landscape and the perfect balance between nature and architecture! Like my studio, Post House will remain open to those who wish to experience an example of quality living in a sustainable environment. Since Post House is the first residence completed at Schooner Bay and an archetypal example of Schooner’s architectural vocabulary, I have decided to make the house available to interested guests who would like to experience a night in Schooner Bay. As I continue to travel widely and also spend time in my Nassau studio, there should be several available weekends for visitors throughout the fall and winter.

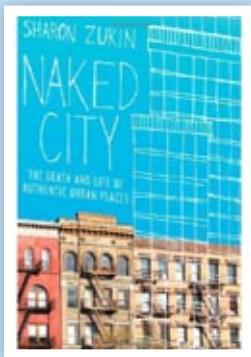


SCHOONER BAY LIBRARY BOOKS



FROM ECO-CITIES TO LIVING MACHINES: PRINCIPLES OF ECOLOGICAL DESIGN *by Nancy Jack Todd and John Todd*

From Eco-cities to Living Machines presents the ecologically-based working designs and prototypes of biologist and Schooner Bay consultant, John Todd, and writer and environmental activist, Nancy Todd. Since they founded the New Alchemy Institute on Cape Cod in 1969, the Todds have become known world-wide for their leadership in the restoration of pure water, bioremediation of wild aquatic environments, food production, and urban design. In this new book, the Todds further develop the idea of Eco-cities, designs for integrating agriculture and flowing pure water into green urban settings, and introduce Living Machines, a family of technologies for purifying wastewaters to tertiary quality effluent without chemicals. Provocative and grounded firmly in the principles of biodiversity, the Todds' work encompasses site-specific technological interventions and systems-wide ecological planners and designers, environmental economists, and systems-based engineers working to change the way we utilize production, technology, water and energy.



NAKED CITY: THE DEATH AND LIFE OF AUTHENTIC AMERICAN PLACES *By Sharon Zukin*

In *Naked City*, sociologist Sharon Zukin shows how the increasingly pervasive demand for urban authenticity - evident in escalating real estate prices, expensive stores, and closely monitored urban streetscapes - has helped drive out the very people who first lent a neighborhood its authentic aura: immigrants, the working class, and artists. Zukin traces this economic and social evolution in six archetypal New York areas: Williamsburg, Harlem, the East Village, Union Square, Red Hook, and the city's community gardens. She shows that for followers of famed urbanist, Jane Jacobs [*The Death and Life of Great American Cities*], this transformation is a perversion of what was supposed to happen. Zukin's panoramic survey of contemporary New York explains how our desire to consume authentic experience has become a central force in making cities more exclusive.



SPRAWL REPAIR MANUAL *By Galina Tachieva*

Galina Tachieva, a partner and director of town planning at Duany Plater-Zyberk & Company (DPZ), is an expert on successful implementation of urban development in a range of environments, from downtowns to suburban retrofits and resorts. Galina is the lead planner on the DPZ Schooner Bay team. In the *Sprawl Repair Manual* (Island Press, July 2010), Tachieva presents a comprehensive methodology for transforming sprawl developments into human-scale, sustainable communities. In this richly illustrated book, Tachieva draws on more than two decades of experience to provide a step-by-step process of design, regulatory, and implementation techniques for re-urbanizing and rebalancing suburbia.



SCHOONER BAY LIBRARY QUOTES

“I only feel angry when I see waste. When I see people throwing away things we could use.”

— *Mother Teresa*

“Use it up, wear it out, make it do, or do without.”

— *New England proverb*

“Do not wait for extraordinary circumstances to do good action; try to use ordinary situations.”

— *Jean Paul Richter*

“Now I truly believe that we in this generation must come to terms with nature, and I think we’re challenged, as mankind has never been challenged before, to prove our maturity and our mastery, not of nature but of ourselves.”

— *Rachel Carson*

“The battle we have fought, and are still fighting, for the forests is part of the eternal conflict between right and wrong, and we cannot expect to see the end of it...So we must count on watching and striving for these trees, and should always be glad to find anything so surely good and noble to strive for.”

— *John Muir*

“We shall never understand the natural environment until we see it as a living organism. Land can be healthy or sick, fertile or barren, rich or poor, lovingly nurtured or bled white. Our present attitudes and laws governing the ownership and use of land represent an abuse of the concept of private property.... Today you can murder land for private profit. You can leave the corpse for all to see and nobody calls the cops.”

— *Paul Brooks*

“We find ourselves ethically destitute just when, for the first time, we are faced with ultimacy, the irreversible closing down of the earth’s functioning in its major life systems. Our ethical traditions know how to deal with suicide, homicide and even genocide, but these traditions collapse entirely when confronted with biocide, the killing of the life systems of the earth, and geocide, the devastation of the earth itself.”

— *Father Thomas Berry*

“A society is defined not only by what it creates, but by what it refuses to destroy.”

— *John Sawhill*